



A Third Age of Avatars

Bruce Damer, bruce@damer.com

damer.com | digitalspace.com | ccon.org | biota.org | digibarn.com

VIRTUAL WORLDS TIMELINE:

THE ORIGINS, EVOLUTION AND FUTURE OF THE VIRTUAL WORLDS MEDIUM

ABOUT ME



- ◊ Started life on a PDP-11 fresh out of high school (1980), programmed graphics, videotext systems, dreamed of self replicating robots on the moon, designed board games, built model space stations.
- ◊ Worked at **IBM Research** in 1984 (Toronto, New York), introduced to Internet, optical computing.
- ◊ At **Elixir Technologies** 1987-94, wrote some of first GUI/Windows-Icons Publishing software on the IBM PC platform used 100 countries.



ABOUT ME



- ò Established *Contact Consortium* in 1995, held first conferences on avatars (Earth to Avatars, Oct 1996)
- ò Wrote “*Avatars!*” in 1997. Hosted and supported 9 conferences until 2003 on various aspects of virtual worlds (AVATARS Conferences, VLearn3D, Digital Biota)
- ò Founded *DigitalSpace* in 1995, produced 3D worlds for government, corporate, university, and industry. Evangelism for Adobe (Atmosphere), NASA (Digital Spaces, open source 3D worlds for design simulation of space exploration) and NIH (learning games for Autism)
- ò Established *Digibarn Computer Museum* (2002)
- ò *Virtual Worlds Timeline* project (2006-2008) to capture and represent the history of the medium

OVERVIEW OF PRESENTATION

- ò The Virtual World, its Origins in Deep Time
- ò Text Worlds
- ò Graphical Worlds
- ò Internet-Connected Worlds
- ò The Avatars Cyberconferences
- ò Massive Multiplayer Online RPGs
- ò Virtual World Platforms
- ò Virtual Worlds Timeline Project and Other Research

History of Virtual Worlds

The Virtual World, its Origins in Deep Time

So what is a *Virtual World*?

A place
described by words or projected through pictures
which creates a space
in the imagination
real enough that you can feel
you are inside of it.

So...
computers project
words and pictures...

... therefore we find virtual worlds
only on computers right?

But wait...

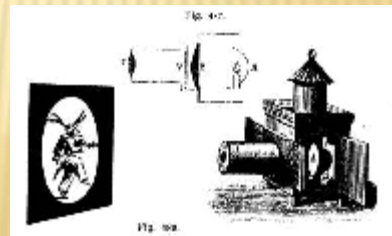
*Was the digital computer the first place people
experienced virtual worlds?*

What about...

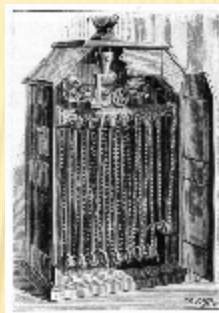
25,000 BCE
in the Caves of Lascaux?



Or in 1671
Through The Lanterna Magica



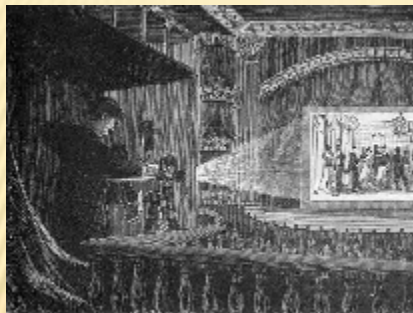
Or in 1894
Through the Edison Kinetoscope



Kinetoscope Parlor - 1890s



Projection of Film, Lumiere, Edison - 1895



History of Virtual Worlds

The First Age: Precursor Virtual Worlds

...and computers are here (just barely) but we can
already play Spacewar!

(world's first multiple player videogame running on the PDP-1
in February 1962 when yours truly was just a couple of weeks old!)



Hello (3D virtual) World! (Maze War)

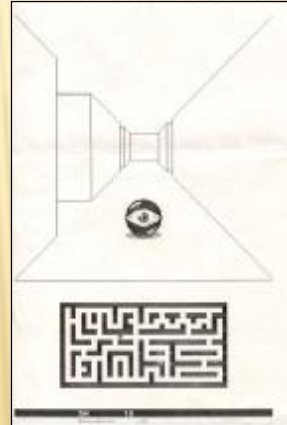


EARLY VERSION OF MAZE WAR GAME



MAZE WAR - 1974

- ò *Maze War* was the first multiplayer **3D** first-person shooter.
- ò Players were represented as **Avatars** (vector drawn names at first, 3D eyeballs in Xerox Alto version, late 70's).
- ò Displayed maps of the levels.
- ò Player positions shown on map.
- ò Originally written by **Steve Colley** in 1973-1974 at the **NASA Ames Research Center** in California.



Maze War in Action

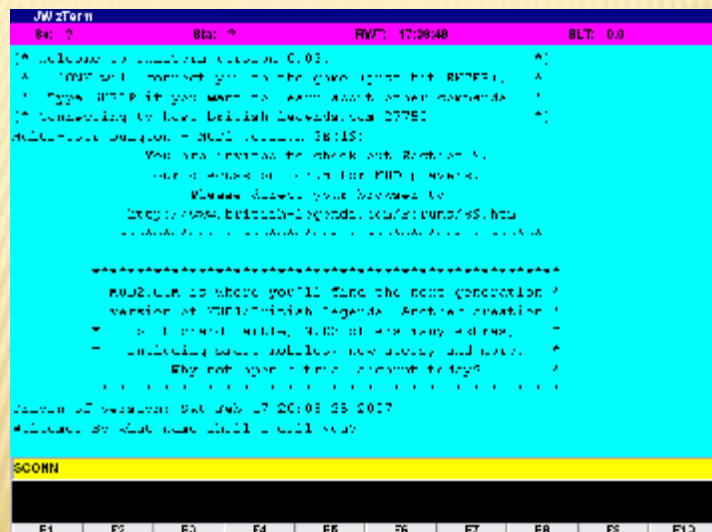
Maze War Film Clip



Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099
1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	

- ## MUD's (Multi-User Dungeons, Domain or Dimension)

FOOD & DRUGS — MONITOR



MUDS

- ò *MUDS* always start by asking for your name.
- ò Your name would be your “tag” and would identify you in the game world.
- ò Text commands are translated to movement and actions.
- ò Limited interaction with other players beyond chat.

AVATAR MUD

- ò *Avatar MUD* released in 1979.
- ò First mainframe Role Playing Game (on PLATO).
- ò Based on *Dungeons and Dragons* rules.
- ò Mixed text and graphics.
- ò First system to use the *A,S,D,W* movement keys scheme.
- ò Allowed for groups, or parties, for completing quests.

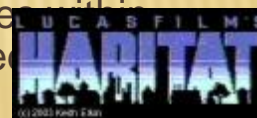




And now affordable personal computers come with graphics so why not...

HABITAT BY LUCAS GAMES - 1987

- ò *Habitat* was released on the *Commodore 64*.
- ò Created by *Randy Farmer* and *Chip Morningstar*.
- ò Hosted on *Quantum Link*, an online service for the *Commodore 64*, and progenitor to *America Online*.
- ò Players could see, speak and interact with each other in avatar form.
- ò Avatars had to barter for resources within *Habitat*, and could even be robbed by other players.



CHAOS IN HABITAT

- ò The virtual world of *Habitat* was completely open.
- ò Only the underlying software was off-limits.
- ò This initially led to chaos in-game.
- ò Players eventually self-governed their world.



DOOM - 1993

- ò Proved that real-time 3D could achieve high performance on consumer PCs.
- ò Internet was spreading so it was only a matter of time until...



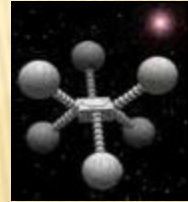
History of Virtual Worlds

The Second Age: Internet-Connected Virtual Worlds



WORLDS CHAT SPACE STATION - 1995

- ò *Worlds Chat Space Station* combined the **3D** visual appeal of Doom with online virtual world.
- ò Players created unique avatars/chat



The 1990s - The Early Adopter "Cambrian Explosion" period

Multi player gaming vs. multi user social virtual worlds

1994-1996: along with the explosion of the web, an explosion of social virtual worlds platforms



Lets take a look...



ALPHAWORLD - 1995

Virtual World - 1995

AlphaWorld at 15 OW facing SE

File Teleport View Options Show Avatar Web Help

HAPPY ANGRY WAVE

Sun Feb 16
21:13:34 1997
203 citizens in
72 worlds

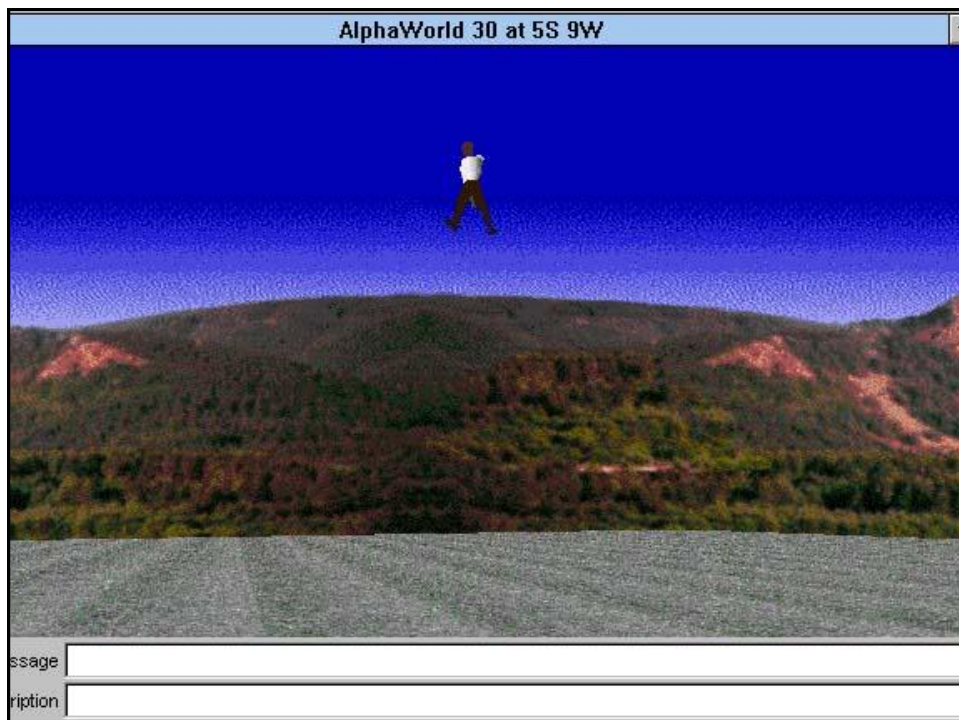
World	Uptime
ow	114:52
gate	145:53
guild	115:22

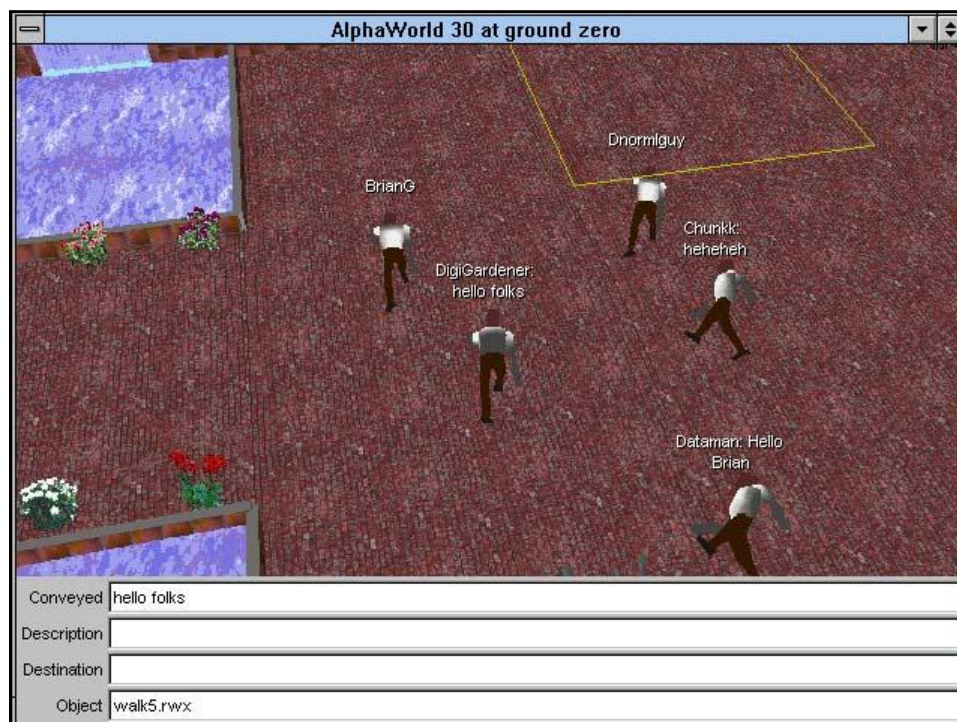
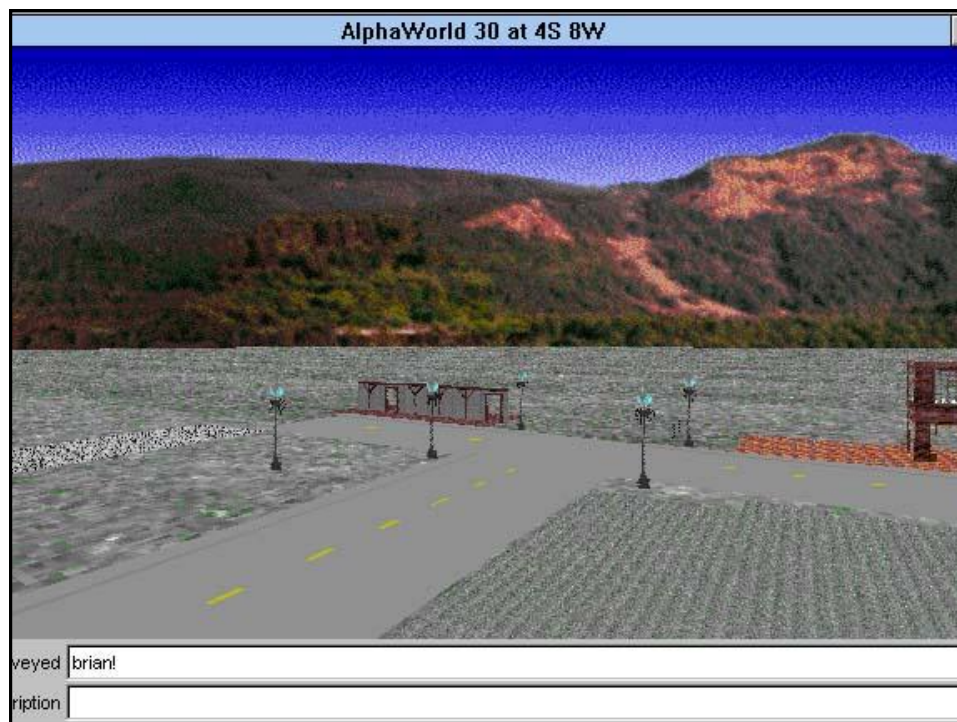
Maxwell1: It's nice and warm where I live
 Dan Crow: right
 Malik: Hey babe
 Brown Bear: wow, nest, how many children, and do you blow the glass??
 Dan Crow: btw, it was me who said I was a man
 Sid: run, where r y from?

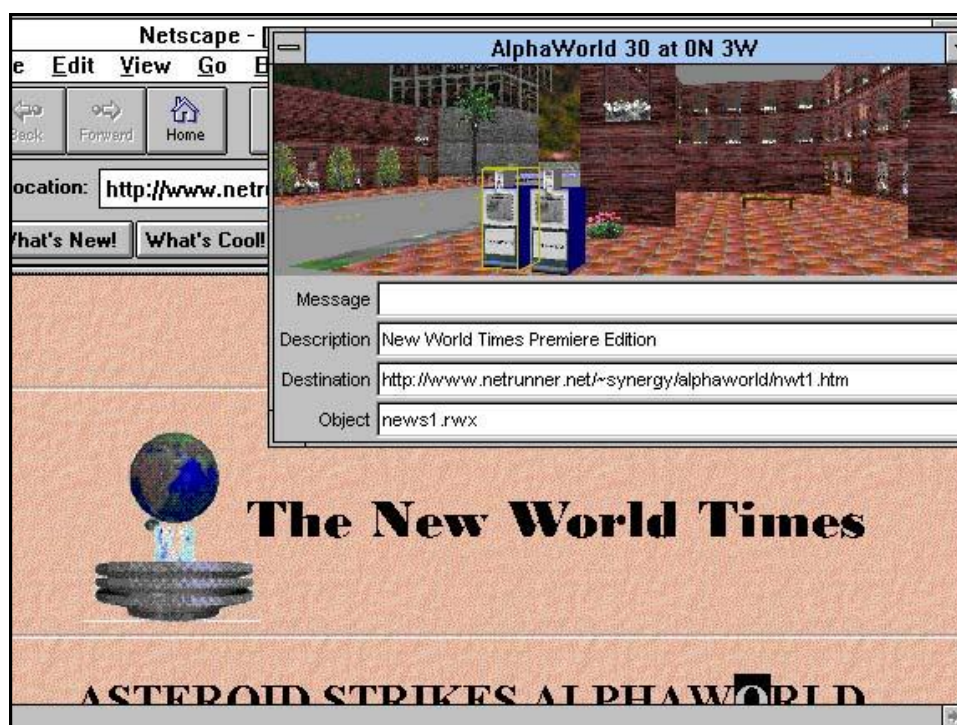
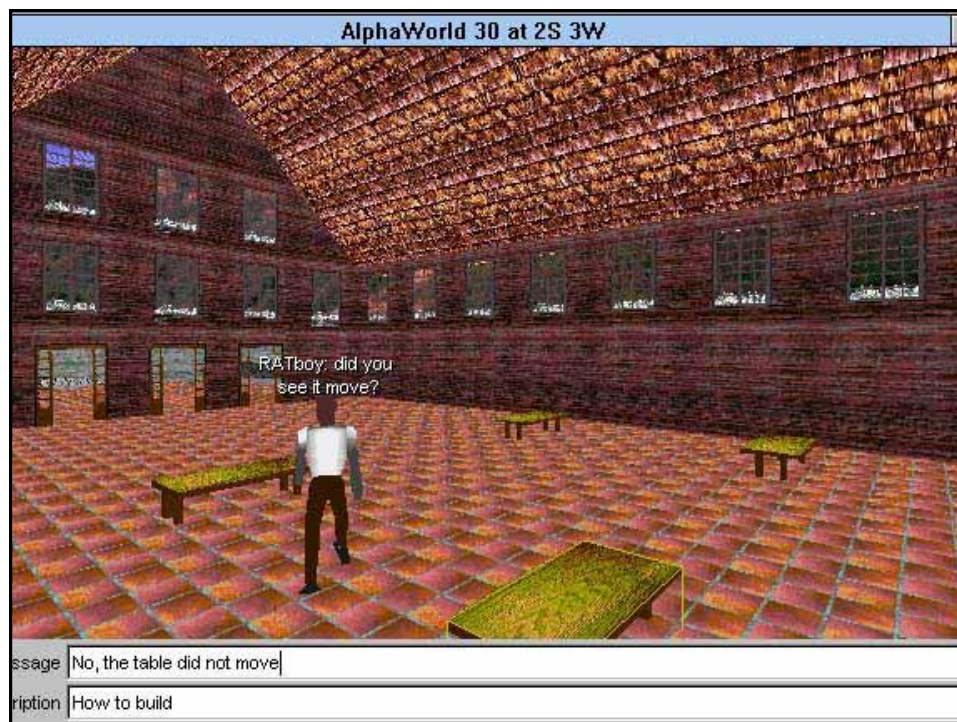
4.2 K/sec 3.4 frames/sec 30 meters

ACTIVE WORLDS

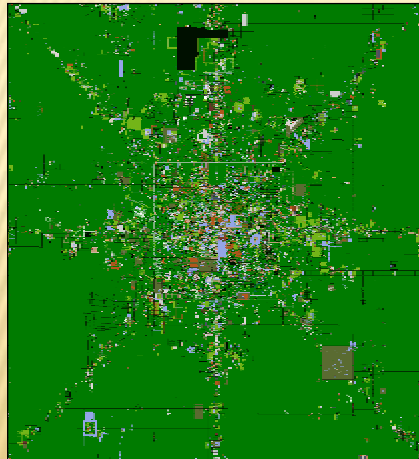
- ò *Alphaworld* was the first *Active World*, and ran from an Internet browser.
- ò Citizens could chat with other citizens and build buildings from selected objects.
- ò Citizens claimed land by placing objects, other users could delete objects and buildings.
- ò Precursor to Second Life's in-world building paradigm.
- ò Individuals could own worlds and universes.
- ò This platform is still online today with over 700 *Active Worlds* <http://www.activeworlds.com/>



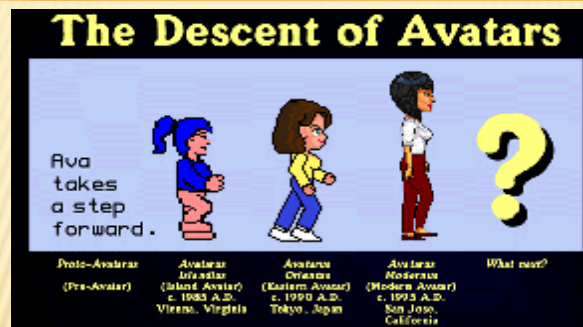




ALPHAWORLD GROWTH FROM 1995 - 2001

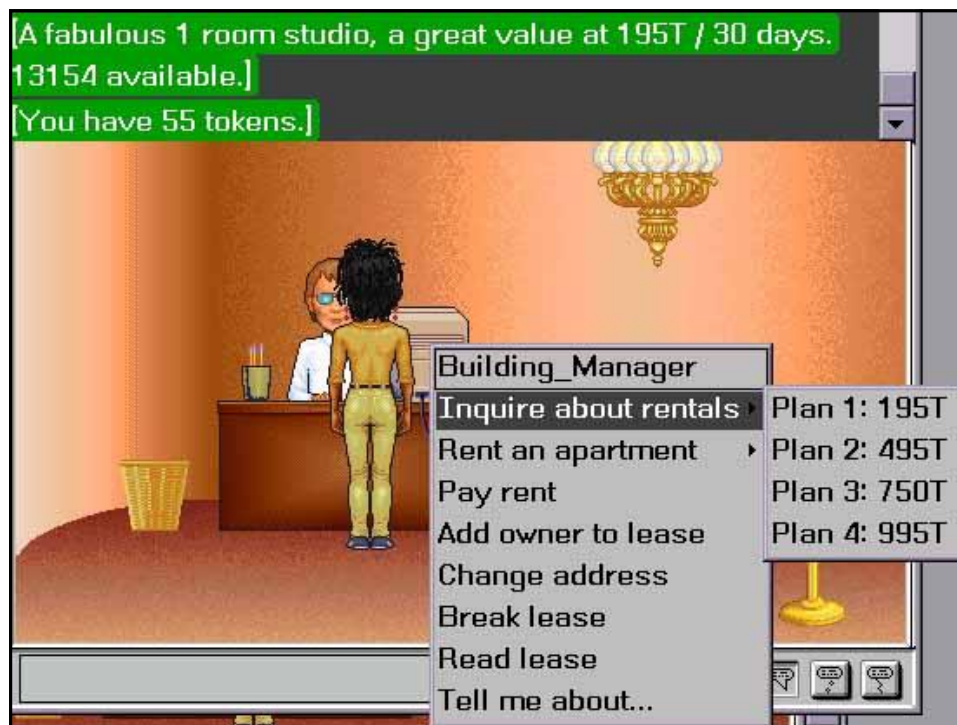


Fujitsu WorldsAway Dreamscape



- Direct offspring of Habitat
 - Virtual currencies, prices and private "turfs"
 - Vending systems and barter trade, gift giving
 - Precursor of Second Life's object economy
 - Financial success, but sold by parent, operating as Vzones
- WorldsAway goes online in 1995...





THE PALACE - 1995



TRAVELER - 1996

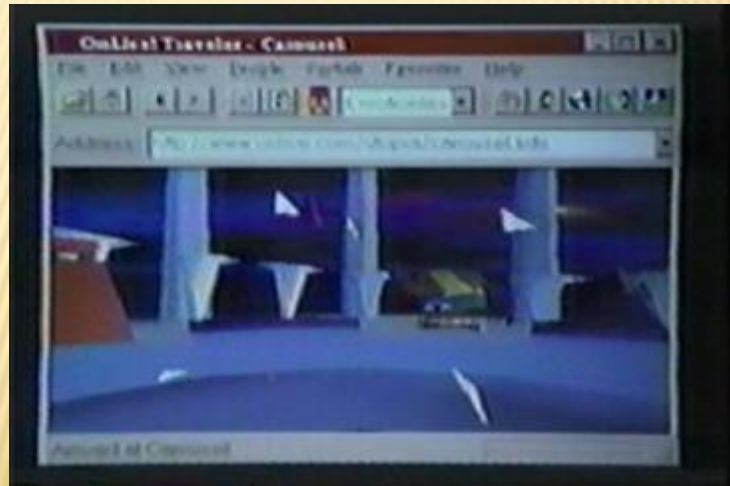


Traveler goes live Spring 1996...

TRAVELER - 1996

TRAVELER - 1996

Traveler Film Clip (CNET TV)



Black Sun Interactive (Blaxxun)

Pointworld



Black Sun
goes online
in early
1996...

Other worlds coming online in 1996



History of Virtual Worlds
The Avatars Cyberconferences

The Avatars Conferences – full circle



1997



1998



1999



2000



1996



2007

2004



2002 2003



2001

The Avatars RL Conferences

Earth to Avatars 96 (San Francisco)



Mark Pesce

Tony Parisi

John Sculley

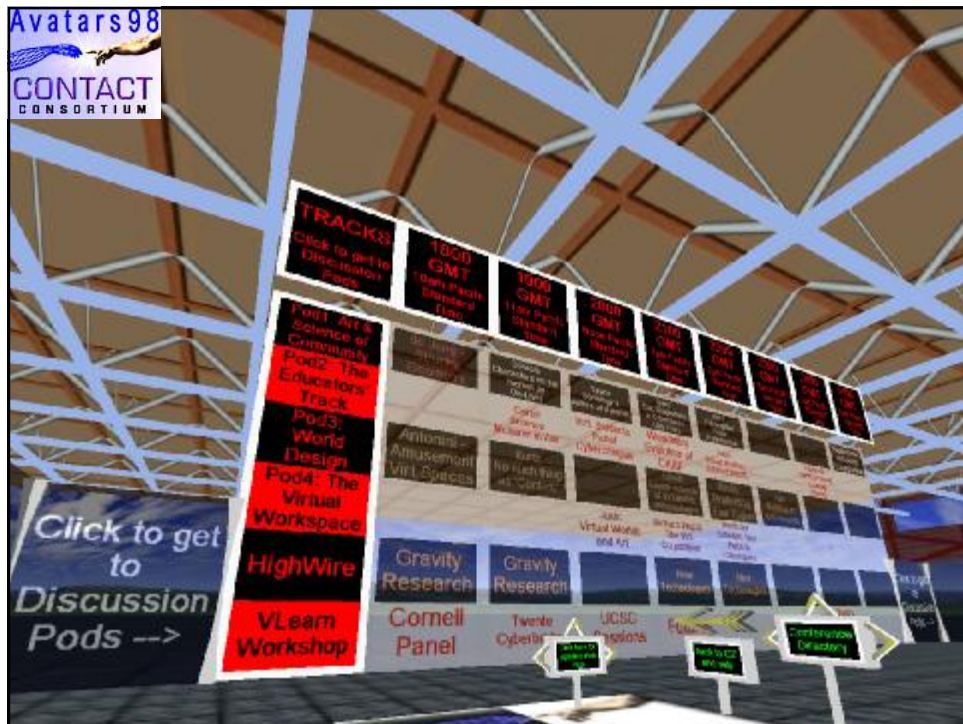
Bruce Darnier







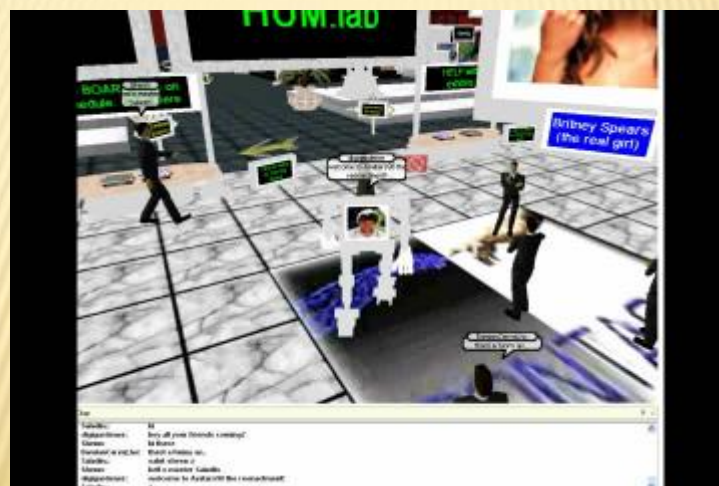


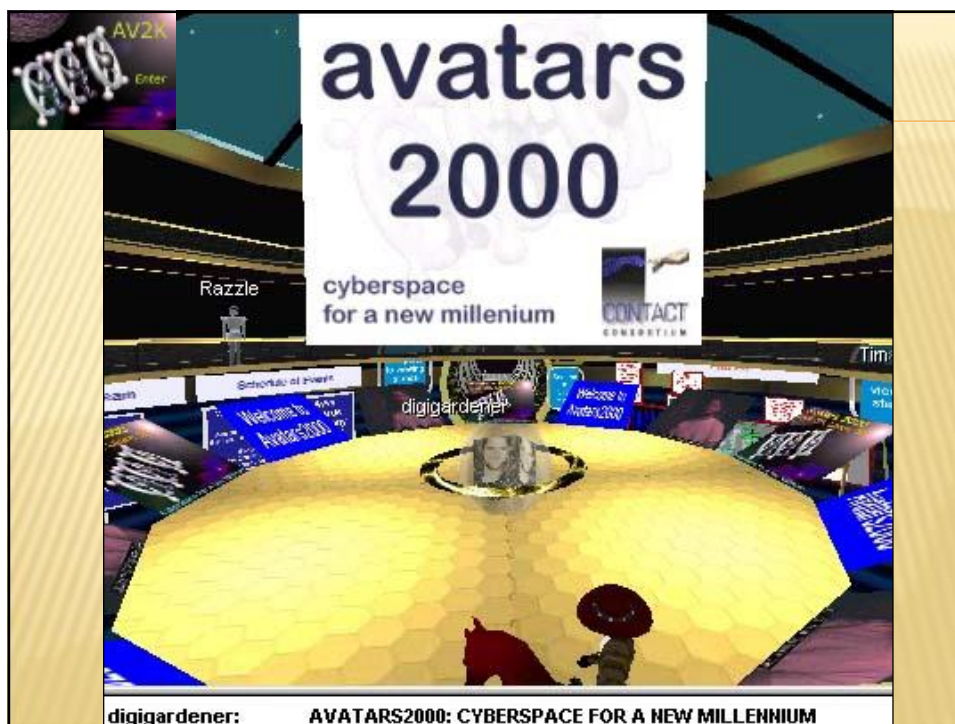


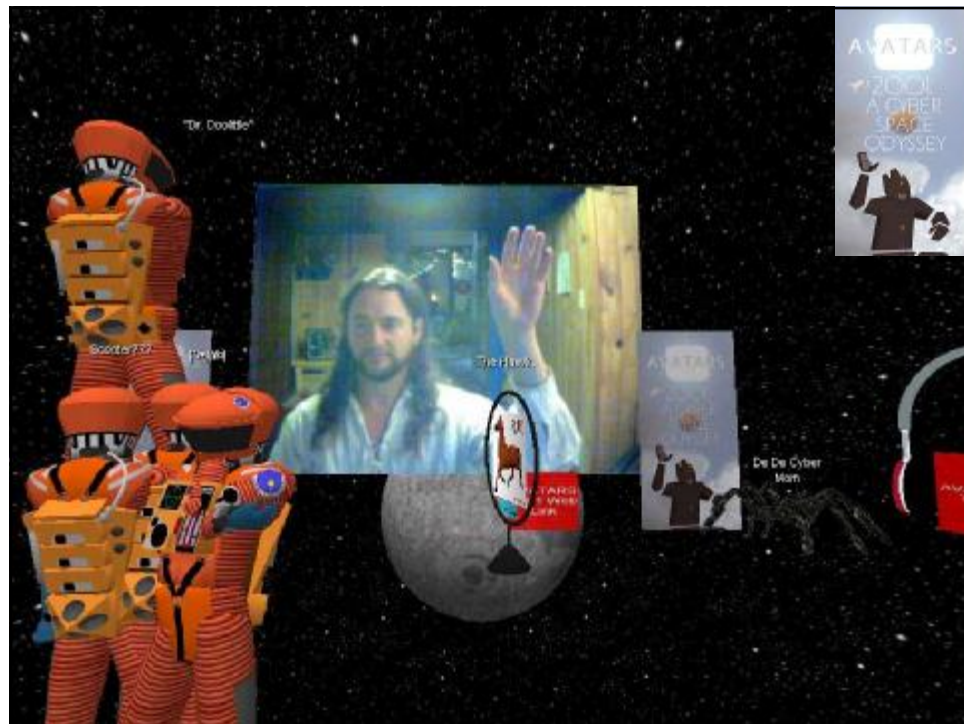


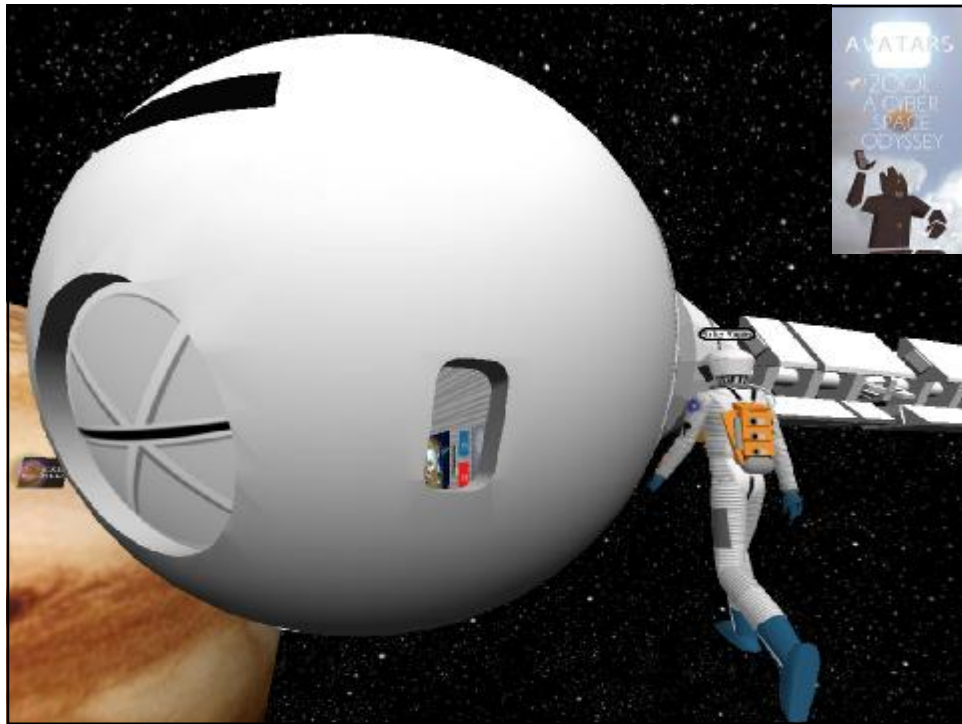
Tour of Avatars98 Exhibits Area

Av98 Film Clip

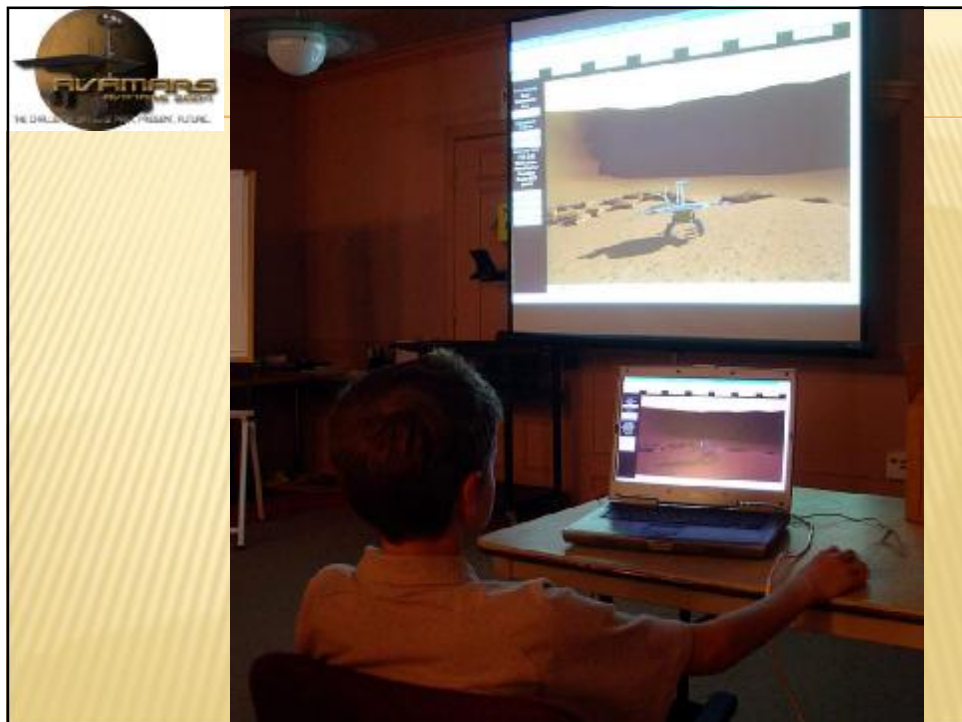












History of Virtual Worlds

The Third Age: Massively Multiplayer Online Role Playing Games, Virtual Worlds' Second Coming

EVERQUEST - 1999



MMO'S INVADE MAINSTREAM

- ò In 1999 *Sony Online* released *Everquest*.
- ò *Everquest* was the first truly *3D* massive multiplayer online role playing game (*MMORPG*).
- ò Thousands of players could be online at once participating in shared quests, player vs. player (*PVP*) combat, and player vs. environment (*PVE/exploring*).
- ò This game launched the current generation of *MMO's*, including virtual world platforms.

RUNESCAPE - 2001



STAR WARS GALAXIES - 2003



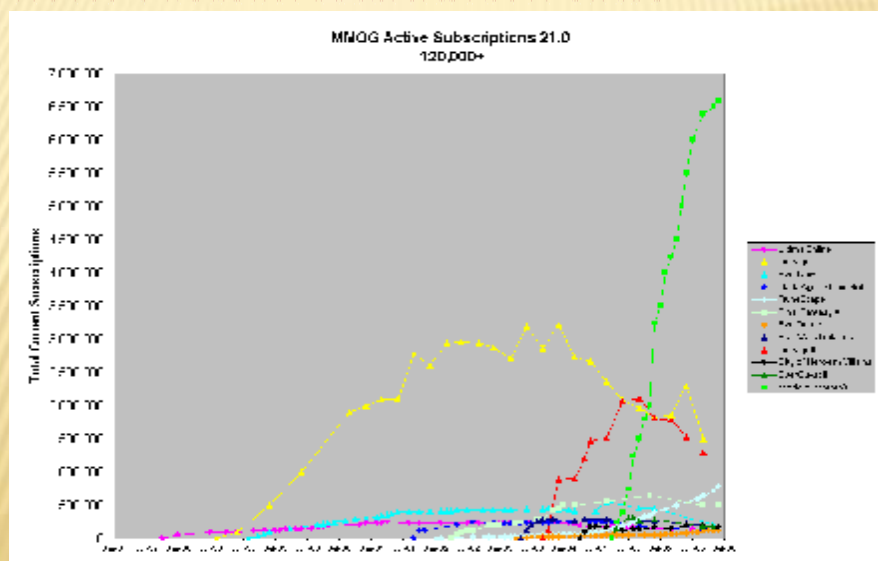
WORLD OF WARCRAFT - 2004



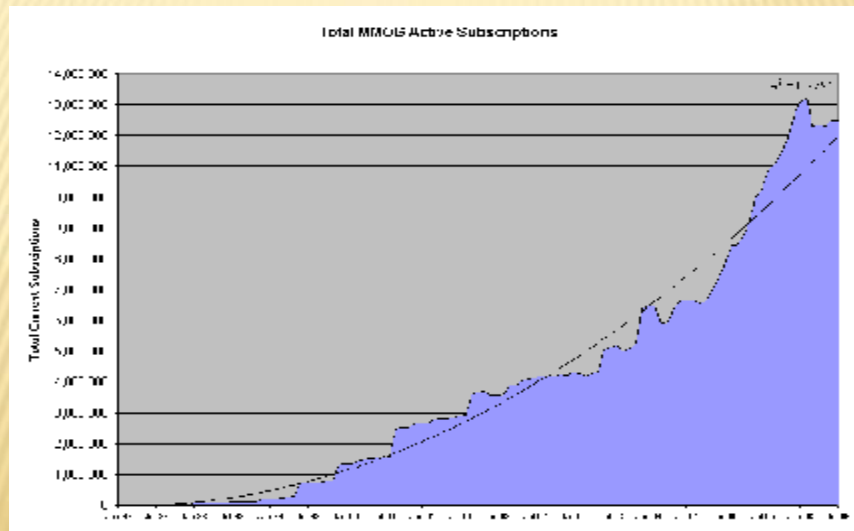
WOW – THE 2,000 LB GORILLA MMO

- ò *World of Warcraft* currently boasts over 8 million paid subscribers.
- ò The recent release of *The Burning Crusades* expansion broke all sales records.
- ò Some say that *WOW* is hurting innovation in computer games because it holds so much of the *MMO* market.
- ò Fantasy setting with two groups of races that are at war with each other: *Alliance vs Horde*
- ò Quest and story driven game engine, heavy social focus. High level content available to groups only.

[HTTP://WWW.MMOCHART.COM](http://www.mmochart.com)



VIRTUAL WORLDS A REALITY

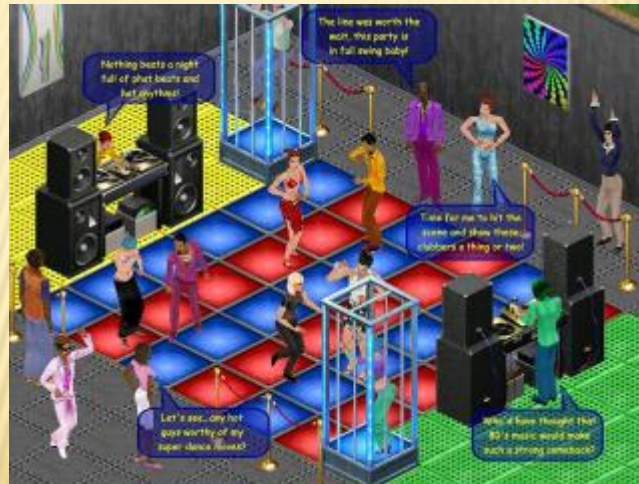


VIRTUAL REALITY?

- ò *Virtual Worlds* differ from *MMO's* because they are open platforms, often allowing the players to shape the world content. Virtual Worlds are not Virtual Reality (no immersion).
- ò There are no quests, no specific goals, and varying degrees of user control over the environment.
- ò These worlds are usually built around social interactions, commerce, and collaborative activities.

THE SIMS ONLINE - 2002

THE SIMS ONLINE - 2002



TOONTOWN ONLINE - 2003

TOONTOWN ONLINE - 2003



THERE.COM - 2003



MTV VIRTUAL LAGUNA BEACH - 2006



SECOND LIFE - 2003



SECOND LIFE PLATFORM

- ò *Second Life* was launched in 2003.
- ò The entire virtual world of *Second Life* has been created by the “residents”.
- ò Full 3D tools built into the client software for creation of in-world objects.
- ò Full scripting language to support intelligent behavior and animation.
- ò Growing support for multimedia, video and audio. Limited formats so far.
- ò Economy based on *Lindex Exchange*, a floating currency exchange between *US\$* and *L\$*.

FUTURE OF SECOND LIFE

- ò Client/server just placed in Open Source
- ò Spatial voice support in beta in 2007.
- ò Security being added into system in preparation for a distributed architecture.
- ò *Linden Lab* trying hard to be “the next big thing” in virtual worlds, *Web 3.0*
- ò *Continuation as separate company or acquisition?*

MULTIVERSE – 2007?



3B VILLAGES - 2007



KANEVA - BETA - 2007?



GOOGLE METAVERSE – 2007?



History of Virtual Worlds

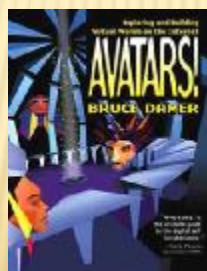
Virtual Worlds Timeline Project and other
Research

Key Anniversaries in the History – on the 7s

- ò Lucasfilm's 1987 *Official Avatars Handbook*, Damer 1997 *Avatars!*, many books & publications
- ò Academia: hundreds of research programs
- ò 2007: Need for a comprehensive timeline project to capture ephemeral artifacts before they are lost



Lucasfilm 1987



Damer 1997



VWTimeline 2007

The Social Virtual Worlds Timeline Project



- ò Sponsored by the Contact Consortium
- ò Avatars book, version 2.0
- ò Enable the community to tell the history
- ò Simple web-based timeline, Wiki entry, MIT SIMILE project Ajax Timeline
- ò Scope from 1970s to present
- ò A place for current virtual worlds history to be recorded, within the context of the movement it represents
- ò Several universities, companies and individuals being signed up (HUMLab, University of Umea, WebHistory project to possibly host focus area)
- ò You can be a part of it! See www.vwtimeline.org

RESEARCH ON VIRTUAL WORLDS

- ò **MMOG Chart**, Industry statistics on virtual worlds and MMO's <http://www.mmogchart.com>
- ò **The Daedalus Project**, Nick Yee. The psychology of MMORPG's <http://www.nickyee.com/daedalus>
- ò **Terra Nova**, serious researchers blog on MMORPG's and Virtual Worlds <http://terranova.blogs.com>
- ò **PlayOn**, exploring the social dimensions of virtual worlds <http://blogs.parc.com/playon>

HISTORY OF VIRTUAL WORLDS

- ò **Raph Koster's Online World Timeline** <http://www.raphkoster.com/gaming/mudtimeline.shtml>
- ò **Bruce Damer's Virtual Worlds Timeline**, the origins and evolution of virtual social worlds <http://www.vwtimeline.org>
- ò **The Lessons of Lucasfilm's Habitat** <http://www.scara.com/~ole/literatur/LessonsOfHabitat.html>

FURTHER READING

- ò **Avatars!** Exploring and Building Virtual Worlds on the Internet – *Bruce Damer*
- ò **Designing Virtual Worlds** – *Richard A. Bartle*
- ò **Synthetic Worlds:** The Business of Online Games – *Edward Castronova*
- ò **Convergence Culture:** Where old and new media collide – *Henry Jenkins, MIT*
- ò **The State of Play:** Law, Games and Virtual Worlds - *Jack M. Balkin*
- ò **Second Life:** The Official Guide – *Linden Lab*

Second Life Video Documentary Explosion

- ò **What is Second Life? Philip Rosedale:** (3:42 mins)
http://www.youtube.com/watch?v=5GZPoOC_06M&mode=related&search=
- ò **NOAA Virtual Education Island:** (4:29 mins)
<http://www.youtube.com/watch?v=is8YX32GAYQ>
- ò **Henry Jenkins, MIT on Global Kids Island:** (2:32 mins)
<http://youtube.com/watch?v=sAQ2V356q-Y>
- ò **Global Kids/Unicef Competition:** (2:27 mins)
<http://youtube.com/watch?v=jQr0izgm0iw>
- ò **Text 100 Island:** (2:59 mins)
http://www.youtube.com/watch?v=synxFmQJ_0A

Future of Social Virtual Worlds

discussion

- ò **Make a buck, sustain high development and content creation costs**
- ò **Creating inclusive community experiences, sustainable companies**
- ò **Distributed vs centralized content**
- ò **Shared realities, political organization**
- ò **New medium of artistic expression**
- ò **Learning spaces, research environments**
- ò **Open source?**
- ò **Your thoughts?**

QUESTIONS

